Chapter One
INVENTORY

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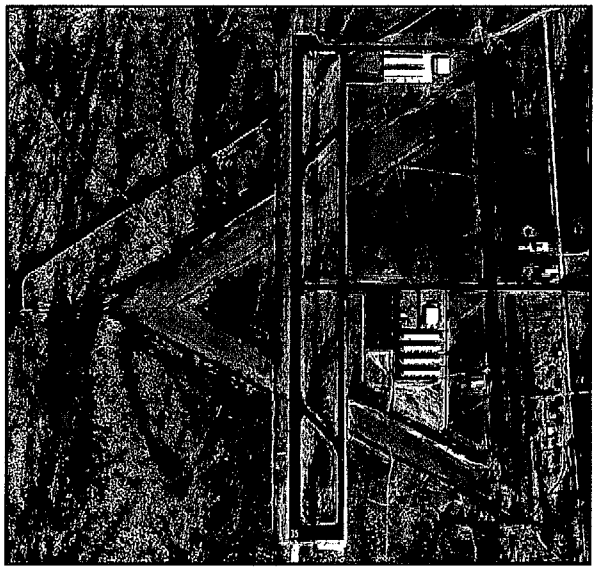
INVENTORY

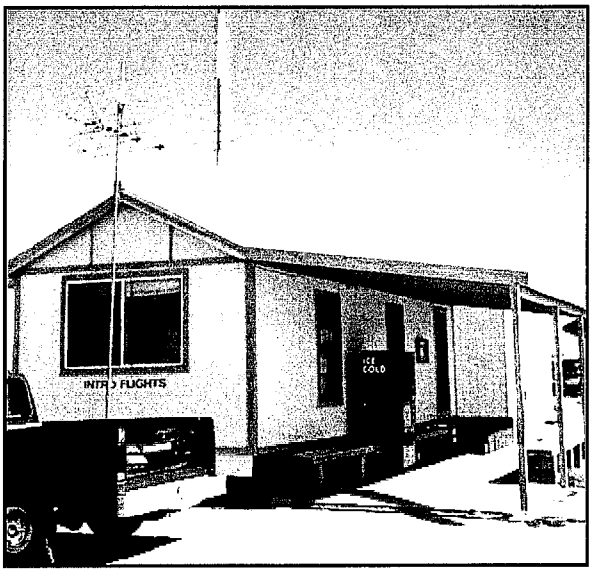


The inventory of existing conditions at Buckeye Municipal Airport will serve as an overview of the airport, its facilities, its role in regional and national aviation systems, and the relationship to development which has occurred around the airport over the years. The information delineated in this chapter will provide a foundation, or starting point, for all subsequent evaluations.

The development of a master plan for Buckeye Municipal Airport required the collection and evaluation of information relating to the airport and surrounding area including the following.

- Physical inventories and descriptions of facilities and services now provided by the airport.
- Background information pertaining to the Buckeye area and descriptions of development which has taken place in the airport environs recently.
- Population and socioeconomic information which provides an indication of the market and possible future development in Maricopa County and the Buckeye area.
- An overview of existing regional plans and studies to determine their potential influence on the development and implementation of the airport master plan.

An accurate and complete inventory is essential to the success of a master plan. This information was obtained through on-site investigations of the airport and interviews with airport management, airport tenants, representatives of various government agencies, and regional economic agencies. Information was also



obtained from available studies concerning the airport and the Maricopa County area, including the previous **Airport Master Plan** (1984), the Maricopa Association of Governments (MAG) **Regional Aviation System Plan** (1996), and the **1995 Arizona State Aviation Needs Study.**

Buckeye Municipal Airport is classified in the **National Plan of Integrated Airport Systems (NPIAS)** as a general aviation airport. This classification is given to airports which meet a criterion of at least 10 based aircraft and are at least 30 minutes from the nearest NPIAS airport. Airports classified in the NPIAS are eligible for federal funding from the Airport Improvement Program (AIP).

AIRPORT DEVELOPMENT HISTORY

Originally constructed during World War II by Luke Air Force Base, Buckeye Municipal Airport was utilized by the Air Force as an auxiliary base for military training purposes. In 1949, the airfield was decommissioned and transferred to the State of Arizona by Quit Claim Deed under the Surplus Property Act of 1944. The Town of Buckeye subsequently acquired the airport from the state on March 11, 1960, also by Quit Claim Deed.

Arranged in a triangular fashion, the original airport layout provided three operational runways. Because the maintenance cost of three runways was high, the Town of Buckeye decided to maintain the pavement of a single runway. The original Runway (16-34), located due east of the existing terminal area, was improved in the 1960's and served as the primary runway until the mid-1980's. This proved to constitute the largest expenditure for airport improvements over the 20 year period.

Upon completion of the existing Airport Master Plan in 1984, the Town of Buckeye decided to delegate airport responsibilities to a single lessee. In September of 1985, the Lauridsen Industrial Corporation was selected as the sole lessee and signed a 25 year master lease with the Town. The lease was approved by the Federal Aviation Administration (FAA) and was structured in a manner which prevents exclusive rights. The master lease provided the Lauridsen Industrial Corporation the opportunity to operate and develop the airport. The lease also stipulated, however, that the lessee was responsible for all local share funding of airport improvement projects within the first five year capital improvement program.

At this time, Runway 16-34 needed reconstruction and Runways 4-22 and 10-28 had deteriorated beyond their useful life. With plans in hand to construct a new runway, the Town of Buckeye asked for approval from the FAA to close and abandon Runway 4-22 and 10-28 and allow for Runway 16-34 to become a taxiway for the planned industrial airpark. The FAA agreed to the request and construction of Runway 17-35 was completed in 1987. The runway was constructed on the west side of the terminal area to allow for future expansion capabilities and adequate taxiway access.

AIRPORT SETTING

Buckeye Municipal Airport is situated in a broad valley between the White Tank and Vulture Mountains to the north and the Maricopa and Gila Bend Mountains to the south. The airport is located within central Maricopa County, approximately 6 miles northwest of the Town of Buckeye and 31 miles west of Phoenix. **Exhibit 1A** depicts the Town of Buckeye and the airport in their regional setting.

Palo Verde Road, a north-south aligned roadway east of the airport, provides direct ground access to the airport. Local and regional access to the airport is afforded from U.S. Interstate 10 located approximately one mile north of the airport. The Town of Buckeye is served by State Route 85 and a number of local roadways.

CLIMATE

Weather conditions play an important role in the planning and development of an airport. Temperature is an important factor in determining runway length requirements. Wind direction and speed are used in determining optimum runway orientation. The percentage of time that visibility is impaired due to cloud coverage or other conditions is a major factor in determining the need for navigational aids and lighting.

The annual average maximum daily temperature for the Buckeye area is 87.2 degrees (F). An average maximum daily high temperature of 107.3 degrees (F) is experienced in July, the hottest month of the year. The coolest month is January with an average daily low temperature of 34.3 degrees (F). Annual precipitation averages 7.08 inches with the wettest month (August), averaging 1.26 inches of precipitation. June is the driest month, averaging only 0.07 inches of precipitation.

Analysis of wind data depicted on the previous airport layout plan (ALP) windrose indicates that calm wind conditions prevail 90.4 percent of the year. The current runway configuration provides just over 98 percent wind coverage for winds 15 miles per hour and less.

AREA LAND USE

Historically, the Town of Buckeye developed along State Route 85. The town originated as a retail trading and marketing center to serve the agricultural based community.

In May 1978, Buckeye took legal action to protect and control its surrounding area from encroachment by other cities. In this action, the town annexed a peripheral strip of land which encompasses a total area of approximately 122 square miles. This area is considered as the Town of Buckeye's Municipal Planning Area (MPA). Approximately 50 percent of this area is agriculture in nature.

Depicted on **Exhibit 1B** is the land use plan adopted and included in the **General Development Plan, 1989-2000**, planned for land surrounding the

airport becoming an Airport District. The airport district includes an Airport Compatibility Zone to ensure that the airport clear zones will be protected from incompatible uses.

Information regarding the current local land use was obtained from the Town Planner. The **Town of Buckeye Land Use District Map**, adopted August 19, 1996, indicates that the land north and south of the airfield and all of airport property has been designated within the General Commerce Land Use District. The General Commerce Land Use District is designed to accommodate a variety of commerce and specialized development, including commercial uses which comprise the central business district of Buckeye.

Land adjacent and west of the airport along Johnson Road, has been designated as Rural Residential. The community of Hopeville, the closest residential subdivision, is located immediately east of the airport on the east side of Palo Verde Road. Immediately east of the airport and Palo Verde Road, a majority of the land has been delineated as Planned Community, with smaller parcels designated as Commerce Center and Planned Residential. A large area north of the airport and I-10 is designated as Planned Community.

AIRPORT FACILITIES

This section presents in quantitative and qualitative terms, a description of the existing facilities at the Buckeye Municipal Airport. For ease of reference, the section is presented as follows:

- Airfield Facilities
- Terminal Area Facilities

AIRFIELD FACILITIES

The existing airfield facilities for Buckeye Municipal Airport include a runway, taxiways, navigational aids, and airfield lighting. **Exhibit 1C** depicts existing airfield facilities.

RUNWAY

As previously mentioned, the original airport served as an Air Force Auxiliary Base providing three operational runways. Those runways have been deactivated and Buckeye Municipal Airport is currently served by a single runway constructed in 1987.

Runway 17-35 is aligned in a north-south direction and is capable of handling operations by small general aviation aircraft. Measuring 4,300 feet long by 75 feet wide, Runway 17-35's asphalt surface was designed and constructed to accommodate 12,500 pounds single gear wheel strength (SWL). The runway is served by medium intensity runway lighting (MIRL) and is marked with basic runway marking. **Table 1A** presents runway data for Buckeye Municipal Airport.

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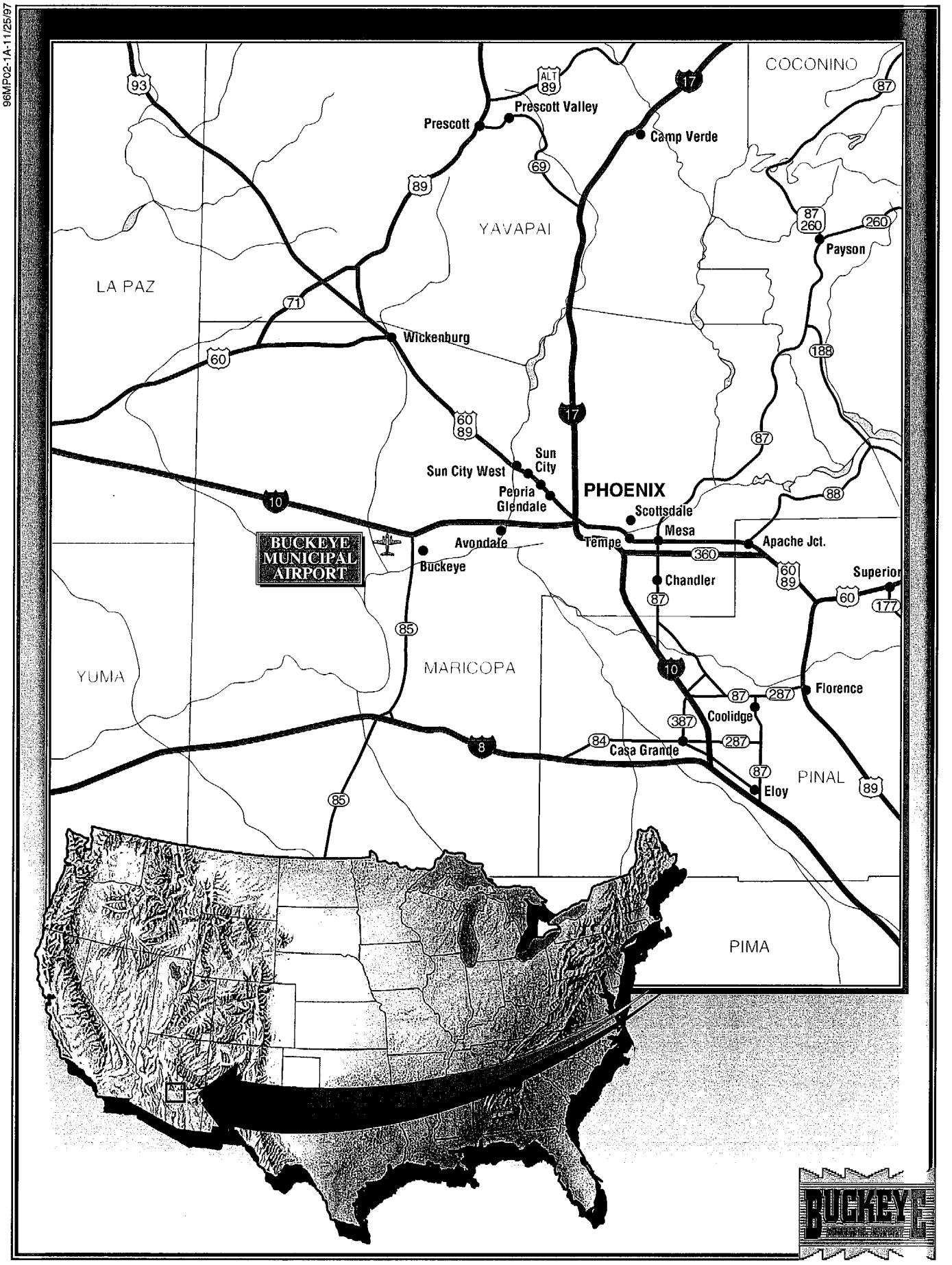

Exhibit 1A
LOCATION MAP

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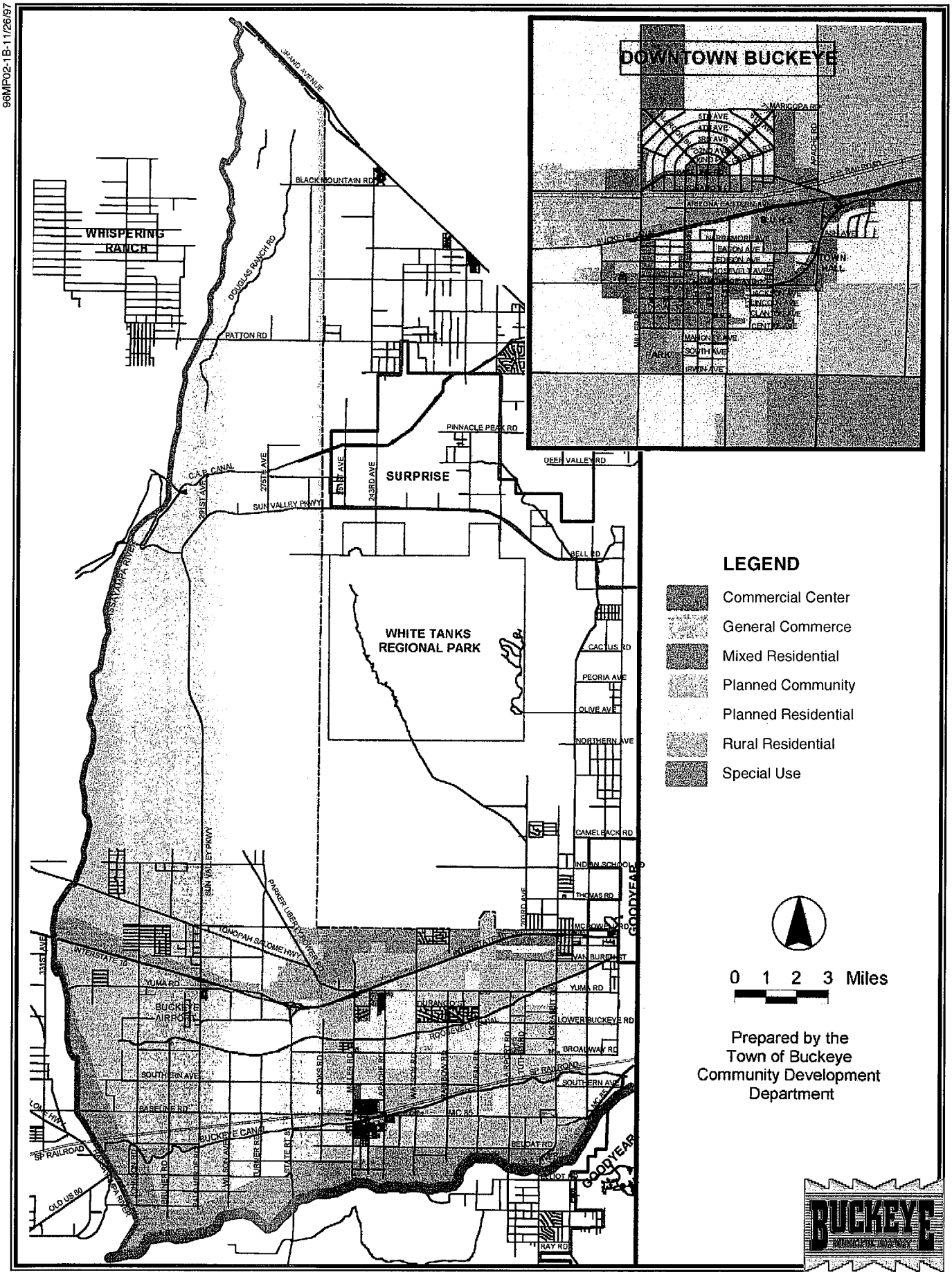

Exhibit 1B
LAND USE PLAN

TAXIWAYS

The taxiway system at Buckeye Municipal Airport consists of parallel, connecting, access and exit taxiways as depicted on **Exhibit 1C**. All taxiways are 40 feet wide and are served by medium intensity taxiway lighting (MITL).

Taxiway H is a full length parallel taxiway serving Runway 17-35. This taxiway is located on the east side of Runway 17-35 and provides direct access to the runway and terminal areas.

TABLE 1A
Runway Data Table
Buckeye Municipal Airport

	Runway 17-35
Length (ft.)	4,300
Width (ft.)	75
Surface Material	Asphalt
Pavement Strength (lbs.)	12,500 SWL*
Approach Aids	
PAPI-4	Yes
Lighting	MIRL**
Segmented Circle	Yes
Windcone	Yes
Rotating Beacon	Yes
Runway Marking	Basic

* SWL - Single Gear Wheel Gear
** MIRL - Medium Intensity Runway Lighting
Note: Rotating beacon is not operational

Five exit taxiways are provided from Runway 17-35. Taxiways A and E are located at either end of the runway providing a hold apron for aircraft run-ups. Taxiway E extends east beyond the parallel taxiway to the end of abandoned Runway 16-34.

Taxiways B and D are acute angle taxiways. Taxiway C is located approximately midfield and provides the only ground access to the aircraft parking apron.

IDENTIFICATION LIGHTING

The location and presence of an airport at night is universally indicated by an airport beacon. Buckeye Municipal Airport is equipped with a rotating beacon located immediately east of the main aircraft parking apron. The beacon has never worked, however, and the Town of Buckeye is attempting to secure funding for replacement/repair.

VISUAL APPROACH AIDS

Both ends of Runway 17-35 are equipped with precision approach path indicator (PAPI-2) light systems. This system consists of two-color, high intensity lights focused at predetermined angles to provide visual descent guidance information to the pilot during the final approach to the runway.

TERMINAL AREA FACILITIES

Terminal area facilities consist of supporting aviation related facilities which are essential to the aircraft and pilot/passenger handling functions. The existing terminal area facilities are outlined in the following section and are depicted on **Exhibit 1C**.

GENERAL AVIATION TERMINAL BUILDING

A recently constructed facility located centrally on the aircraft parking apron will serve as the airport's terminal building. It is planned that this facility will house space for flight planning, restroom, and lobby areas for transient pilot/passengers. The building will provide approximately 1,200 square feet of space.

The airport does not currently have paved areas designated for automobile parking. Auto parking is typically accommodated on unpaved areas adjacent to businesses on the airport.

FIXED BASE AND SPECIALTY OPERATORS

As previously mentioned, the Lauridsen Industrial Corp. maintains a 25 year master lease providing control for operation of the airport. The Lauridsen Industrial Corporation provides a number of FBO services to the airport including aircraft maintenance and repair, fuel service, and leasing of hangar and tie-down storage. This operator plans to construct additional T-hangars within the next few years.

Buckeye Aviation is a specialty operator located on the airport providing aircraft maintenance, aircraft rental, and flight instruction. This operator provides aircraft maintenance from a 12,000 square foot conventional hangar and flight training in a mobile facility. Buckeye Aviation instructs on average 5 to 6 students and owns five piston powered aircraft.

Desert Sky Diving is a specialty operator located on the airport. This operator maintains hangar and apron space west of original runway 16-34, east of the terminal area. Utilizing two Cessna 182 aircraft, Desert Sky Diving employs five pilots and has 40 first-time and 15 continuing students on a weekly basis. A landing area just west of original Runway 16-34 has been designated for training purposes.

Airline Training Center (ATC) is another operator which maintains hangar and apron space at the airport. ATC is a specialty pilot training company which attracts students from all over the world. This operator once based 12 aircraft at Buckeye Municipal Airport for pilot training purposes. Although ATC has relocated its operation to Phoenix Goodyear Municipal Airport, this operator has secured a five year lease for a conventional hangar and shade tie-down space north of the terminal area, immediately south of Taxiway E. Discussions with the chief pilot for ATC indicate that the operator utilizes Buckeye Municipal Airport for day/night training and could potentially relocate part of its operation to the airport in the future.

It should be noted that ultralight aircraft also operate at the airport. These aircraft typically utilize the abandoned original runway for operational purposes.

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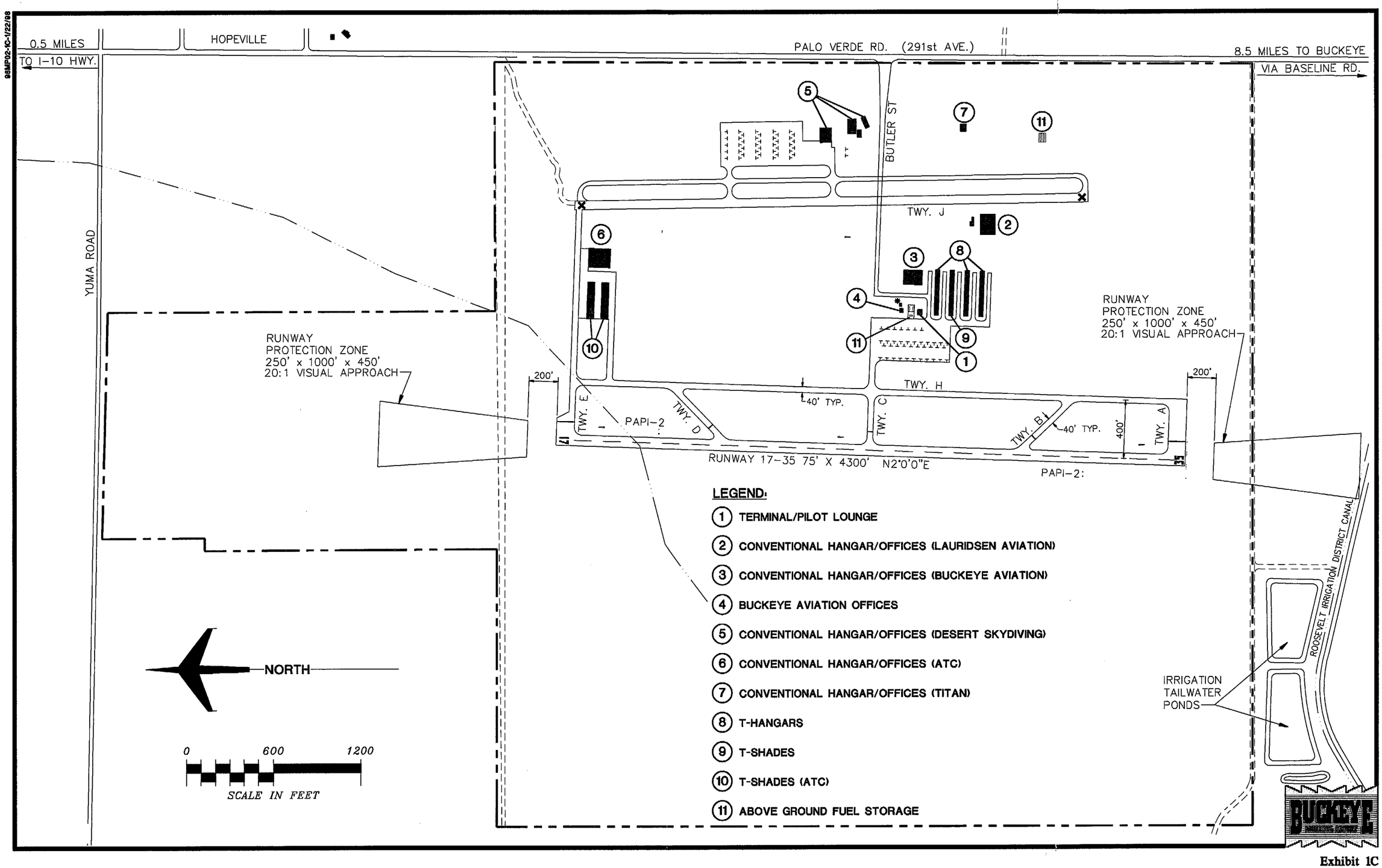

LEGEND:

1. TERMINAL/PILOT LOUNGE
2. CONVENTIONAL HANGAR/OFFICES (LAURIDSEN AVIATION)
3. CONVENTIONAL HANGAR/OFFICES (BUCKEYE AVIATION)
4. BUCKEYE AVIATION OFFICES
5. CONVENTIONAL HANGAR/OFFICES (DESERT SKYDIVING)
6. CONVENTIONAL HANGAR/OFFICES (ATC)
7. CONVENTIONAL HANGAR/OFFICES (TITAN)
8. T-HANGARS
9. T-SHADES
10. T-SHADES (ATC)
11. ABOVE GROUND FUEL STORAGE

Exhibit 1C
EXISTING AIRPORT FACILITIES

AIRCRAFT PARKING APRON

The main aircraft parking apron at Buckeye Municipal Airport is located east of the airfield configuration. Providing approximately 16,700 square yards of pavement, the apron supports 40 aircraft tie-down spaces and taxilane clearance for access to the airfield and T-hangar areas. The aircraft parking apron is not currently separated into based and transient positions. Aircraft parking apron is also located adjacent the facility operated by Desert West Sky Diving east of the terminal area.

AIRCRAFT HANGAR FACILITIES

Hangar facilities at Buckeye Municipal Airport consist of large conventional hangars, nested T-hangars, and shaded tie-down facilities. Four conventional hangar facilities provide over 57,000 square feet of space, while three T-hangar facilities provide storage space for 30 aircraft. There are three shade hangar facilities which provide 22 storage positions.

FUEL FACILITIES

Lauridsen Industrial Corporation operates the fuel facility at Buckeye Municipal Airport. The existing fuel farm is located adjacent the terminal building and consists of two above ground fuel tanks each with a 10,000 gallon storage capacity. This recently constructed fuel farm was designed for self-service fueling. The previous fuel facility, located adjacent the ATC facility, has been abandoned. This fuel farm consists of two above ground fuel storage tanks.

UTILITIES

The availability and capacity of the utilities serving the airport are factors in determining the development potential of the airport property, as well as the land immediately adjacent to the facility. Of primary concern in the inventory investigation is the availability of water, gas, sewer, and power sources.

Electrical service is provided to the airport by Arizona Public Service (APS); U.S. West Communications provides telephone service, and the Town of Buckeye supplies water to the airport via a well located adjacent the airport. Wastewater disposal is accommodated through septic systems. Natural gas is not currently available on the airport.

AIRSPACE AND AIR TRAFFIC CONTROL

The FAA Act of 1958 established the FAA as the responsible agency for the control and use of navigable airspace within the United States. The FAA has established the National Airspace System (NAS) to protect persons and property on the ground and to establish a safe and efficient airspace environment for civil, commercial, and military aviation. The NAS is defined as the common network of U.S. airspace, including air navigation facilities; airports and landing areas; aeronautical charts; associated rules,

regulations and procedures; technical information; personnel and material. System components shared jointly with the military are also included.

ENROUTE AIR NAVIGATIONAL AIDS

Navigational aids are electronic devices that transmit radio frequencies which properly equipped aircraft translate into point-to-point guidance and position information. Ground-based electronic navigational aids that are located near Buckeye Municipal Airport may be classified functionally as enroute air navigational aids. Enroute navaids in the area are comprised of four basic types of equipment, the VOR (very high frequency omnidirectional range), Loran-C, the non-directional radio beacon (NDB), and the Global Positioning System (GPS).

The VOR transmits radio signals every degree to provide 360 individual courses from the transmitting facility. As a VHF facility, the VOR is limited to line of sight transmissions with range affected by the altitude of the aircraft. The VORTAC links the VOR to the military tactical air navigational aid (TACAN) to provide distance-measuring information in nautical miles (NM) from the aircraft to the VORTAC.

Loran-C is a ground based enroute navigational aid which utilizes a system of transmitters located in various locations across the continental United States. Loran-C varies from the VOR as pilots and aircraft are not required to navigate using a specific facility (with the VOR pilots must navigate to and from a specific VOR facility). With properly equipped aircraft, pilots using Loran-C can directly navigate to any airport in the United States.

The NDB, typically based at an airport, assists pilots in flying the appropriate path to the runway end. NDBs are general purpose, low frequency radio beacons that allow pilots to determine their location in relation to the station by bearing.

GPS is an additional enroute navigational aid for pilots enroute to the airport. GPS was initially developed by the United States Department of Defense for military navigation around the world. Increasingly over the last few years, GPS has been utilized by more civilian aircraft. GPS uses satellites placed in a fixed orbit around the globe to transmit electronic signals which properly equipped aircraft use to determine altitude, speed, and navigational information. GPS is similar to Loran-C as pilots do not have to navigate to or from a specific ground based facility. GPS provides the greatest level of accuracy of all enroute navigational aids.

There are three ground based enroute navigational aids located within a 30 NM radius of Buckeye Municipal Airport: the Buckeye and Gila Bend VORTACs and the Glendale NDB. The Buckeye VORTAC is located approximately 7 NM northwest of Buckeye Municipal Airport, and the Gila Bend VORTAC is located approximately 28 NM south of the airfield at Gila Bend Municipal Airport.

The Glendale NDB is located approximately 20 NM northeast of the airport.

AREA AIRPORTS

There are a number of airports of various sizes, capacities, and functions within and just outside of the airport service area as indicated on **Exhibit 1D, Area Airspace**. Generally, airports within a 30 nautical mile range could have a significant impact on an airport and its operation. The airports described below are those within approximately 30 nautical miles of Buckeye Municipal Airport or are important to the airspace and control environment of the area.

Sky Harbor International Airport (PHX) is located 32 nautical miles east of the Buckeye Municipal Airport in the heart of Phoenix. The airport is owned and operated by the City of Phoenix and is the largest air carrier airport within the State of Arizona, and the only jet air carrier airport within the Phoenix area. Sky Harbor is served by most of the major airlines with Southwest and America West utilizing the airport as a hub. In 1995, the airport ranked tenth among domestic airports with over 13.7 million enplanements.

Sky Harbor International runway is equipped with two 150 feet wide parallel runways both of which are over 10,000 feet in length. An array of instrument approach aids, including an instrument landing system (ILS), aid pilots on approach during inclement weather conditions. The airport is served by seven published instrument approaches with the ILS Runway 8R approach certified for Category I weather minimums (200 foot cloud ceiling and one-half mile visibility).

Although the airport's primary role is to provide commercial service to the area, the airport also serves general aviation activity. The airport has approximately 256 based aircraft including seven jets and 14 helicopters. FBO services and aircraft tie-down and hangar storage is also provided.

Luke Air Force Base is located 15 nautical miles northeast of Buckeye Municipal Airport and serves as a major tactical jet training base for the U.S. Air Force. Luke Air Force Base is equipped with two parallel runways oriented in a northeast-southwest direction with one runway measuring at least 10,000 feet. Although the airfield is closed to the public, the location of the facility poses considerable airspace concerns. It is not uncommon for low level jet training activity associated with the airbase to occur near the Buckeye Municipal Airport. Airspace considerations associated with the airbase will be discussed further in the **Airspace Structure** section of this chapter.

Gila Bend Municipal Airport is a general aviation airport located approximately 28 nautical miles south of Buckeye Municipal Airport. Runway 4-22 is the airport's only runway measuring 5,200 feet long by 75 feet wide. The airport has two based aircraft and provides fueling services.

Glendale Municipal Airport is located 20 nautical miles northeast of Buckeye Municipal Airport. The airport is owned by the City of Glendale and is served by one runway. Runway 1-19 is 5,350 feet long by 75 feet wide and is equipped with runway lighting, runway end identifier lights (REIL), and precision approach path indicators (PAPI). The airport is served by an air traffic control tower (ATCT) and an on-site non-directional radio beacon (NDB). Approximately 157 fixed wing aircraft and two helicopters are based at the Glendale Municipal Airport. A full range of FBO services are provided including major aircraft maintenance and repair, aircraft charter, aircraft rental and fuel sales.

Phoenix Goodyear Municipal Airport, located 15 nautical miles to the east, is the closest publicly owned airport to Buckeye Municipal Airport. Owned and operated by the City of Phoenix, the airport is designated as a reliever airport to Sky Harbor International Airport. The airport provides Runway 3-21 which is 8,500 feet long by 150 feet wide. Served by an ATCT, the airport is a base to 152 fixed wing aircraft and one helicopter.

Private airports ranging from dirt strips to full-service paved facilities are within the Buckeye Municipal Airport service area. Pierce Airport is the closest privately owned airport located approximately five nautical miles southeast of Buckeye Municipal Airport. The airport's primary role is to serve agricultural spraying operation and is somewhat limited to public use. Watts Airport and Gila Compressor Airport are private airports south of Buckeye Municipal Airport which are restricted from public use. Tonopah Airport, located 15 nautical miles to the northwest, is also restricted from public use.

AIRSPACE STRUCTURE

To ensure a safe and efficient airspace environment for all aspects of aviation, the FAA has established an airspace structure that regulates and establishes procedures for aircraft operating in United States airspace. The basic premise of the airspace structure is that airspace is either controlled or uncontrolled.

High/Low Controlled Airspace

Controlled airspace which is used to enter or depart the Buckeye Municipal Airport area consists of low altitude and high altitude federal airways. Aircraft flying above 18,000 feet mean sea level (MSL) utilize the high altitude airways known as Jet Routes. Aircraft using the Jet Route system are required to operate on an Instrument Flight Plan and maintain radio contact with air traffic control facilities. Aircraft flying below 18,000 feet MSL use the low altitude airway system known as Victor Airways. Victor Airways are corridors of airspace eight miles wide that extend upward from 1,200 feet MSL to 18,000 feet MSL.

As depicted on **Exhibit 1D**, there is only one Victor Airway in the vicinity of

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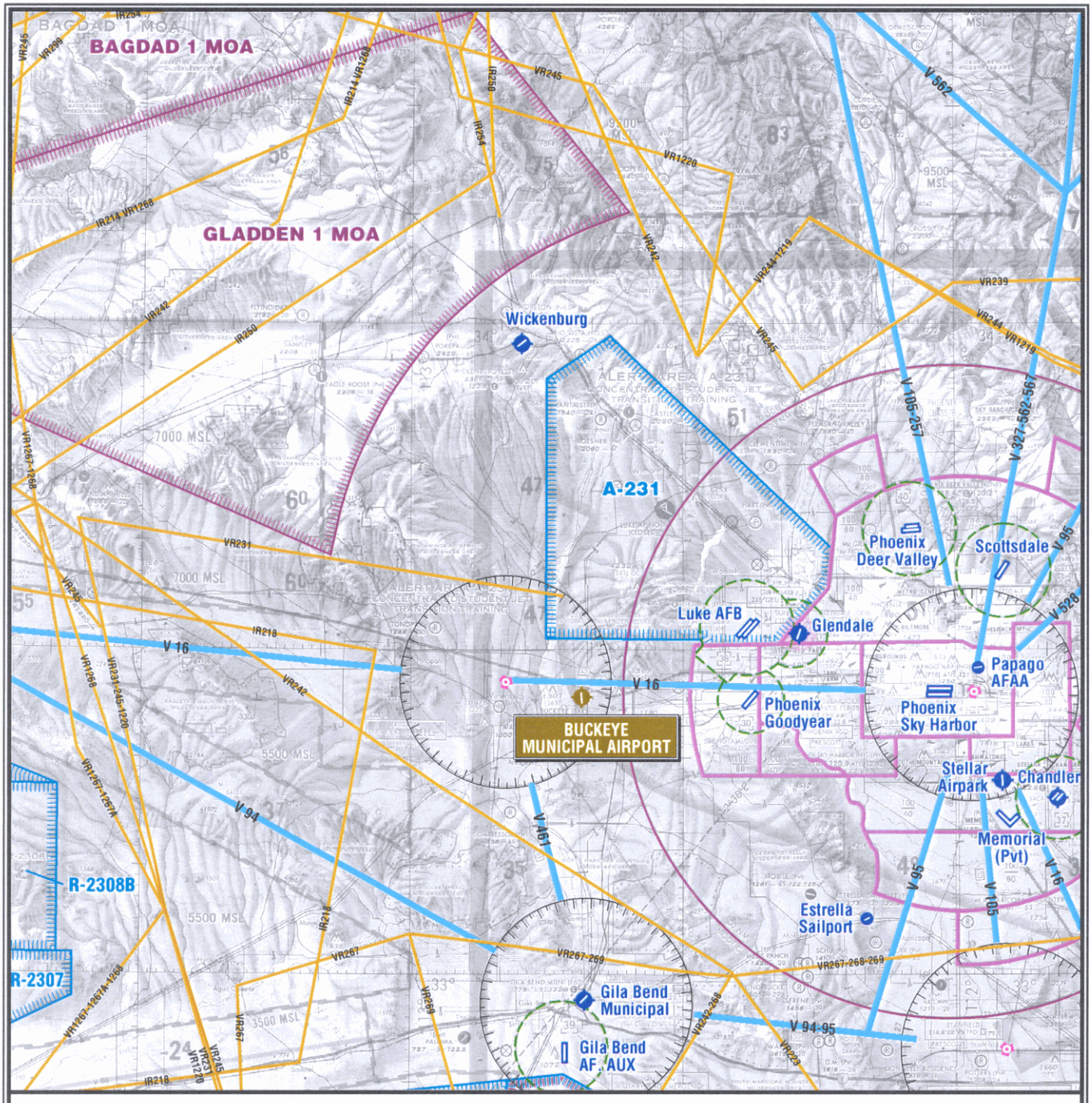

LEGEND

- Hard-surfaced runways 1500 ft. to 8069 ft.
- Hard-surfaced runways greater than 8069 ft. or some multiple runways less than 8069 ft.
- VORTAC
- Non-Directional Radiobeacon (NDB)
- Compass
- Victor Airways
- Military Training Routes
- Prohibited, Restricted, Warning and Alert Areas
- Military Operations Area (MOA)
- Class B Airspace
- Class D Airspace
- MODE C

NORTH

BUCKEYE MUNICIPAL AIRPORT

Exhibit 1D
AREA AIRSPACE

Buckeye Municipal Airport. Victor Airway V16 crosses over just north of the airport, connecting the Buckeye VORTAC to the west and the Phoenix VORTAC to the east. Two Jet Routes, J4 and J65, are in the vicinity of Buckeye Municipal Airport. J4 extends between the Parker VORTAC to the northwest and the San Simon VORTAC to the Southeast. J65 connects the Blythe VORTAC to the west and the Phoenix VORTAC to the east.

Area Airport Airspace Designations

Sky Harbor International Airport is served by a full-time air traffic control tower (ATCT) and is surrounded by *Class B* airspace. *Class B* airspace at PHX is depicted on **Exhibit 1D**. Aircraft must be cleared by air traffic control (ATC) in order to enter *Class B* airspace and must be equipped with an altitude reporting transponder. The outer ring of *Class B* airspace for PHX located just east of the Buckeye Municipal Airport is controlled airspace between the floor of 8,000 feet MSL to a ceiling of 10,000 feet MSL. Although Phoenix's *Class B* airspace is irregularly shaped, the *Class B* airspace floor generally decreases in a stair step manner until it reaches the surface within a 15 nautical mile by 10 nautical mile area surrounding the airport.

Phoenix Goodyear Municipal, Glendale Municipal Airport, and Luke Air Force Base all are within *Class D* space during operational hours of the ATCT. *Class D* airspace requires aircraft to establish two-way communication prior to entry. For Goodyear and Glendale Airports, *Class D* airspace encircles the airports at a three nautical mile radius and extends upward from the surface to 3,000 and 3,100 feet respectively.

Luke Air Force Base's *Class D* airspace has a radius of five nautical miles and extends upward from the ground to 3,600 feet. The *Class D* airspace changes to *Class E* airspace during periods when ATCT is closed. *Class E* airspace is controlled airspace beginning at 1,200 feet above ground level (AGL). Also, it is the minimum requirement at airports served by an instrument approach procedure.

Buckeye Municipal Airport lies on the outer edge of Phoenix's *Class E* airspace. There is no airport traffic control tower at Buckeye Municipal Airport; however, the unicom frequency of 122.8 has been established for aircraft communication. Traffic patterns consist of right hand turns for Runway 17 and left hand turns for Runway 35 which aid in maintaining the traffic pattern west of the airfield.

Special Use Airspace

Three areas near the Buckeye Municipal Airport are classified as special use airspace. Immediately north of the airport is Alert Area-231. This designation indicates airspace which may contain a high volume of pilot training activity. As depicted on **Exhibit 1D**, Alert Area-231 extends around Luke Air Force Base and contains airspace between 500 and 6,500 feet AGL.

Approximately 25 nautical miles northwest of the airport is the Gladden 1 military operations area (MOA). This airspace designation serves to separate military training activity from other IFR traffic with times of use and vertical and lateral limits indicated on the sectional chart.

Approximately 50 nautical miles southwest of the airport are areas designated as restricted airspace. While not wholly prohibited, flight of aircraft within a restricted area is subject to restriction. If not in use by the using agency, the controlling ATC agency may authorize flight into the area.

AIR ROUTE TRAFFIC CONTROL CENTER (ARTCC)

The FAA has established 21 Air Route Traffic Control Centers (ARTCC) in the continental United States to control aircraft operating under instrument flight rules (IFR) within controlled airspace and while in the enroute phase of flight. An ARTCC assigns specific routes and altitudes along federal airways to maintain separation and orderly air traffic flow. Centers use radio communication and long range radar with automatic tracking capability to provide enroute air traffic services. Typically, the ARTCC splits its airspace into sectors and assigns a controller or team of controllers to each sector. As an aircraft travels through the ARTCC one hands off control to another. Each sector guides the aircraft using discrete radio frequencies.

Albuquerque ARTCC is responsible for enroute control of all aircraft operating under IFR and participating VFR aircraft arriving and departing the Phoenix and Buckeye area.

SOCIOECONOMIC CHARACTERISTICS

A variety of historical and forecast socioeconomic data, related to the Buckeye area, was collected for use in various elements of this master plan. This information is essential in determining aviation service level requirements, as well as forecasting the number of based aircraft and aircraft activity at the airport. Aviation forecasts are normally directly related to the population base, economic strength of the region, and the ability of the region to sustain a strong economic base over an extended period of time.

POPULATION

The size and structure of the local communities and the service area that the airport supports are important factors to consider when planning airport facilities. These factors provide an understanding of the economic base that is needed to determine future airport requirements. Due to its unique locale, Maricopa County has become a prime destination for vacationers and seasonal residents making it difficult to determine the true permanent population. All population figures presented in this section are permanent residents.

Historical and forecast population data for Maricopa County presented in **Table 1B** was obtained from the Arizona Department of Economic Security, while historical and forecast population data for the Buckeye MPA (as defined on page 1-3) was obtained from the Maricopa County Association of Governments (MAG).

TABLE 1B
Historic and Forecast Population Estimates

Year	Buckeye MPA[1]	Annual % Growth	Maricopa County[2]	Annual % Growth
1990	9,272	N/A	2,122,101	N/A
1995*	11,194	3.8	2,551,765	3.8
Forecast*				
2000	18,052	10.0	2,954,150	3.0
2010	28,144	4.5	3,329,550	1.2
2015	51,414	12.8	4,101,775	4.3

[1] Maricopa County Association of Governments
[2] Population Statistics Unit, Research Administration, Arizona Department of Economic Security
* Special census conducted in 1995

Between 1990 and 1995 population for the Buckeye MPA and Maricopa County has grown at an average annual rate of 3.8 percent. Although most of the area encompassed by the Buckeye MPA is agricultural land, forecast population for the Buckeye MPA is expected to grow at a considerably higher rate. Much of the growth expected for the Buckeye MPA between 1995 and 2000 (over 4,000 residents) will be housed at a planned prison. Expected growth beyond the year 2000, however, will be to serve the outgrowth of population from the City of Phoenix. Maricopa County is expected to grow at a more constant rate reaching 4,101,775 residents by 2015.

EMPLOYMENT

Table 1C, Maricopa County Historical Employment by Sector, indicates the distribution of the labor force in Maricopa County between 1970 and 1994. Total employment has grown along with population in Maricopa County. Between 1980 and 1994, total employment within Maricopa County has almost doubled, while between 1970 and 1994 total county employment has tripled.

All employment sectors have experienced growth except for the farm sector which decreased on an annual rate of less than one percent.

TABLE 1C
Historic Total Employment by Sector
Maricopa County

Sector	1970	1980	1990	1994	Annual % Growth Rate
Agriculture, Forestry, Fish, & Wildlife	4,898	9,443	12,790	16,810	5.27
Farm	9,030	9,106	7,516	8,045	-0.40
Mining	460	1,186	2,625	2,772	7.77
Construction	26,564	58,324	69,893	88,419	5.14
Manufacturing	73,257	116,024	143,816	144,668	2.88
Transportation & Public Utilities	20,496	32,828	59,905	64,025	4.86
Wholesale Trade	21,907	41,205	65,778	73,043	5.15
Retail Trade	75,816	141,007	217,279	243,151	4.98
F.I.R.E.*	39,075	82,879	128,656	134,746	5.29
Services	85,363	178,865	366,557	420,255	6.87
Government	72,319	115,913	157,864	164,995	4.17
TOTAL EMPLOYMENT	429,185	786,780	1,232,679	1,360,929	4.93

Source: U.S. Department of Commerce, Regional Economic Information System, Bureau of Economic Analysis
* F.I.R.E. - Finance, Insurance, and Real Estate

The mining sector held the largest annual growth rate increasing at 7.7 percent over the period. Services, however, experienced the largest increase in net jobs expanding from 85,363 in 1970 to 420,255 in 1994, an annual percentage increase of 6.87 percent. In 1994, the largest employment sectors include services (31.3 percent), finance, insurance, and real estate (30.9 percent), retail trade (17.9 percent), and government (12.1 percent).

INCOME

Table 1D, Per Capita Personal Income, compares the per capita personal income (PCPI) for Maricopa County, the State of Arizona, and the United States between 1970 and 1994.

As illustrated by the table, the State of Arizona's PCPI has mirrored that of the United States. Arizona's PCPI ranked 38th in the country at 88 percent of the national average ($21,696) in 1994. The average annual growth rate of Arizona's PCPI over the 24 year period was 7.0 percent, while the nation's PCPI averaged 7.2 percent annual growth.

In 1994, Maricopa County had a per capita personal income of $21,364. This PCPI ranked first in the State, and was 111.6 percent of the State average ($19,147) and 98.5 percent of the national average ($21,696). The average annual growth rate of PCPI over the 24 year period was 7.1 percent.

TABLE 1D
Per Capita Personal Income
Maricopa County, State of Arizona

	1970	1980	1990	1994	Annual % Growth Rate
Maricopa County	$4,099	$10,313	$18,256	$21,364	7.1
State of Arizona	$3,777	$9,272	$16,225	$19,147	7.0
United States	$4,047	$9,940	$18,666	$21,696	7.2

Source: U.S. Department of Commerce, Regional Economic Information System, Bureau of Economic Analysis

SUMMARY

The information discussed on the previous pages provides a foundation upon which the remaining elements of the planning process will be constructed. Information on current airport facilities and utilization will serve as a basis, with additional analysis and data collection, for the development of forecasts of aviation activity, and facility requirement determinations.

The inventory of existing conditions is the first step in the complex process of determining those factors which will meet projected aviation demand in the community and region.